

claims] ⁷claim 13, wherein MSL-C or D is covalently linked to
[DPEPC] diphytanyl phosphatidyl choline (DPEPC), [GDPE] glyceryl
diphytanyl ether (GDPE), triphytanyl or similar molecule.

¹⁵~~21~~. (Twice Amended) A method according to claim ~~20~~, 19
wherein MSL-C or D is covalently linked to [MAAD] the disulfide
of mercaptoacetic acid (MAAD) or [EDS] 2-mercaptoethanol (EDS)
and [DPEPC] diphytanyl phosphatidyl choline (DPEPC), [GDPE]
glyceryl diphytanyl ether (GDPE), triphytanyl or similar
molecule.

REMARKS

The Applicants confirm the election of Group I, claims 1-21.

The Applicants wish to draw to the Examiner's attention that the deletion of phrases "or similar molecule" and "or other suitable linker molecules and other ion channel combinations" from the claims is not intended to be an admission that the specification does not enable the use of similar molecules or combinations to those in the claimed methods. The deletions have been made purely for purposes of clarity. It is intended that the doctrine of equivalents will apply, particularly in view of the reference to the inclusion of alternative molecules and combinations in the description.

The Examiner has rejected all of the claims as obvious

over Raguse et al. (5,637,201 and WO 94/07593). The claims have now been amended to include the specific ratios defined in original claims 3 to 5. These ratios are not taught or suggested by the citations referred to by the Examiner, and provide a significant advantage to the working of the invention. For example, the specified ratios ensure that the amount of MSL-D in the first layer is as high as can be allowed and still maintain reasonable gramicidin conduction. The amount of MSL-C is such that in the final sensor membrane an effective surface amplification on addition of analyte occurs, while still making it possible to suppress the lateral segregation induced gating on addition of the streptavidin, avidin or other similar biotin-binding protein. The amount of MSL-C in the final sensor membrane is not so great, however, that the excess protein that is bound to the MSL-C on addition of the streptavidin, avidin or similar biotin-binding protein will restrict the mobility of the gramicidin/receptor couple thereby reducing the gating response. As there is no suggestion whatsoever of these specific ratios or their advantages in the cited art, it is submitted that the present invention is an improvement which is not obvious in view of the cited art.

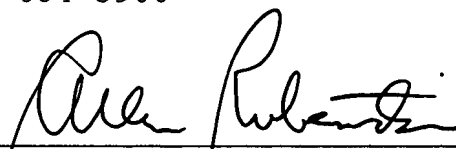
Payment is enclosed for an extension of three months to respond to the office action. The Examiner is authorized to charge any additional amount necessitated by this reply,

including any charges for extensions of time to allow consideration of this or any future reply requiring a petition for an extension of time, to deposit account 07-1730. This authorization should be treated as a constructive petition for such extensions of time, if any, as are necessary.

Respectfully submitted,

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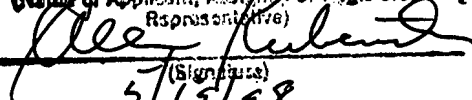
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